

CLAIMS

What is claimed is:

1. A power distribution system for use with a plurality of seats
5 within a structure, the system comprising:

a bus strip having at least one conductive member therein, said bus strip having an access portion that allows access to said conductive member at any location along a length of said access portion, said bus strip extending along a portion of the structure adjacent seats within the structure; and

10 a connector operable to electrically interconnect said bus strip conductive member to a conductive member in a seat, said connector having a plug member operable to be electrically connected to said bus strip conductive member through said access portion, and said connector having a cable operable to be connected to said seat conductive member.

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2. The system of claim 1, wherein said access portion extends along an entirety of said bus strip.

3. The system of claim 1, wherein said access portion is at
20 least one slot that extends along an entirety of said access portion.

4. The system of claim 3, wherein said access portion includes a resilient member with an elongated slot that elastically deforms to allow said plug member to electrically connect to said bus strip conductive member and said
25 slot provides a protective enclosure for said bus strip conductive member.

5. The system of claim 1, wherein said at least one bus strip conductive member is one of a plurality of conductive members and said conductive members include a power supply line, a power return line and a
30 ground line.

6. The system of claim 1, wherein said plug member includes at least one cylindrical pin.

7. The system of claim 1, wherein said plug member includes at least one flat blade.

5 8. The system of claim 1, wherein said connector is selectively securable to said bus strip.

9. The system of claim 1, wherein said bus strip extends along said mobile platform adjacent a seat track.

10. An aircraft comprising:
 - a fuselage having a passenger seating area;
 - a plurality of seats in said seating area;
 - a source operable to supply electrical power and/or data;
 - 5 an elongated bus strip extending along a portion of said seating area, said bus strip having at least one continuous elongated receptacle that extends along an entirety of said bus strip, said receptacle including a conductive member electrically connected to said source; and
 - a connector selectively attachable to said bus strip at any 10 location along said receptacle; said connector having a plug operable to be inserted into said receptacle and into electrical contact with said conductive member, said connector also being electrically connected to at least one of said seats, said connector thereby electrically interconnecting said conductive member to said seat.
- 15 11. The aircraft of claim 10, wherein each seat is part of a seat group and said connector is electrically connected to a seat group.
12. The aircraft of claim 10, wherein said seating area includes 20 at least one seat track that extends along a portion of said seating area, said seat track allowing said seats to be located at a variety of positions along said seat track, and said bus strip extends along said seat track.
13. The aircraft of claim 10, wherein said bus strip resides at or 25 below a floor of said seating area.
14. The aircraft of claim 10, wherein said connector includes a retaining mechanism that selectively secures said connector to said bus strip.
- 30 15. The aircraft of claim 10, wherein said receptacle has a locking detail that releasably engages with said plug to selectively attach said connector to said strip.

16. The aircraft of claim 10, wherein said bus strip has a plurality of receptacles each having a conductive member therein and a first of said receptacles is a current supply, a second of said receptacles is current return and a third of said receptacles is a ground.

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17. The aircraft of claim 10, wherein said bus strip includes a retainer that supports said receptacle and said conductive member, said retainer providing a protective enclosure for said conductive member, and said retainer having a slot through which said plug is inserted to connect to said conductive member.

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18. A method of providing power and/or data to a seat in a passenger seating area of a mobile platform, the method comprising:

(a) attaching an elongated bus strip having an elongated continuous receptacle in a desired location relative to the seating area, said receptacle having a conductive member therein;

(b) attaching a connector to said bus strip at a position near the seat to which power and/or data is to be provided, said connector having a plug that engages with said conductive member when attached to said bus strip, said connector operable to electrically interconnect said conductive member to the seat; and

(c) connecting said bus strip to a power and/or data source on the mobile platform.

19. The method of claim 18, further comprising attaching a seat group to a seat track in the seating area and wherein (a) includes attaching said bus strip in a location adjacent said seat track.

20. The method of claim 19, further comprising attaching a plurality of seat groups to said seat track and positioning said seat groups in desired locations along said seat track, and wherein (b) includes attaching multiple connectors to said bus strip at multiple positions along said bus strip proximate said seat groups thereby interconnecting said conductive member to said seat groups.

25 21. The method of claim 20, wherein each seat group has an attached connector and (b) includes attaching each connector of each seat group to said bus strip at a location proximate that seat group.

30 22. The method of claim 19, wherein (a) includes orienting said bus strip with said receptacle extending along a portion of a length of and adjacent to said seat track.

23. The method of claim 18, wherein (b) includes removably securing said connector to said bus strip.

24. The method of claim 23, wherein (b) includes removably 5 securing said connector to said bus strip with a locking detail in said receptacle and a complementary feature on said plug.

25. The method of claim 23, wherein (b) includes removably securing said connector to said bus strip with a movable extension on said 10 connector that selectively engages with a complementary slot in said bus strip.

26. The method of claim 18, wherein (a) includes attaching multiple elongated bus strips having elongated continuous receptacles at multiple locations relative to the seating area

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27. The method of claim 18, wherein (a) includes attaching an elongated bus strip with multiple elongated continuous receptacles each having a conductive member therein and (b) includes attaching a connector having multiple plugs to said bus strip with each of said plugs engaging with a different 20 one of said receptacles and the conductive member therein.